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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,721	05/02/2001	Jason McCartney	MS1-904US	8414

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EXAMINER
GEREZGIHER, YEMANE M

ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/848,721	MCCARTNEY ET AL.
	Examiner	Art Unit	
	Yemane M. Gerezgiher	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 August 2005</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29,31-38,40,41,43-70,72 and 74* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29,31-38,40,41,43-70,72 and 74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 May 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The response received on 07/05/2005 has been entered. Claims 1-

29,31-38,40,41,43-70,72 and 74 are pending in this application.

2.   The previously indicated allowability of the claims is withdrawn in view of

the newly discovered reference(s) to <u>Kawakita</u> (JP 10283280 A).

Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by
> the manner in which the invention was made.

4.   Claims 1-4, 7, 12-14, 19, 20, 23, 28,29, 29, 37, 38, 40, 41, 43, 44, 49, 50, 51,

55-57, 59, 60, 65, 69, 70, 72 and 74 are rejected under 35 U.S.C. 103(a) as

being unpatentable over <u>Kumaki</u> (U.S. Patent Number 6,219,716) in view of

<u>Sebastian</u> (U.S. Patent Number 6,253,264) further in view of <u>Kawakita</u> (JP

10283280 A).

As per claims 1, 12, 28, 29, 37, 38, 55, 56, 69, 70 and 74: <u>Kumaki</u> disclosed a method program and a system for bidirectional transfer of encoded data sets, which are then expanded using an expansion function at the destination network device. <u>See Title, Abstract and Figure 3</u>. <u>Kumaki</u> disclosed plurality of devices communicating through a communication medium where first and second device in the network comprised a compression unit/function for compressing data sets and an expansion unit for expanding the compressed data sets. <u>See Figure 3.</u> <u>Kumaki</u> further addressed a system and apparatus for encoding and/ or compressing and expanding data in order to minimize the cost of bandwidth when transmitting requested data content in a communication network. <u>See Column 1 Line 66 through Column 2 Line 18</u>. <u>Kumaki</u> disclosed detailed process of encoding and compressing data sets in a communication device and transmitting the compressed data set to the destination device and at the destination device expanding the encoded/compressed data set accordingly. <u>See Figures 3-4, Column 2 Lines 65 and Column 3 Lines 1-41.</u>

<u>Kumaki</u> substantially disclosed the invention as claimed. However, <u>Kumaki</u> failed to teach selecting or identifying a compression function according the information that is common to the individual records in the data sets/groups and similarly making use of an expansion function having therein a semantic information that is common to the individual records in the compressed data set.
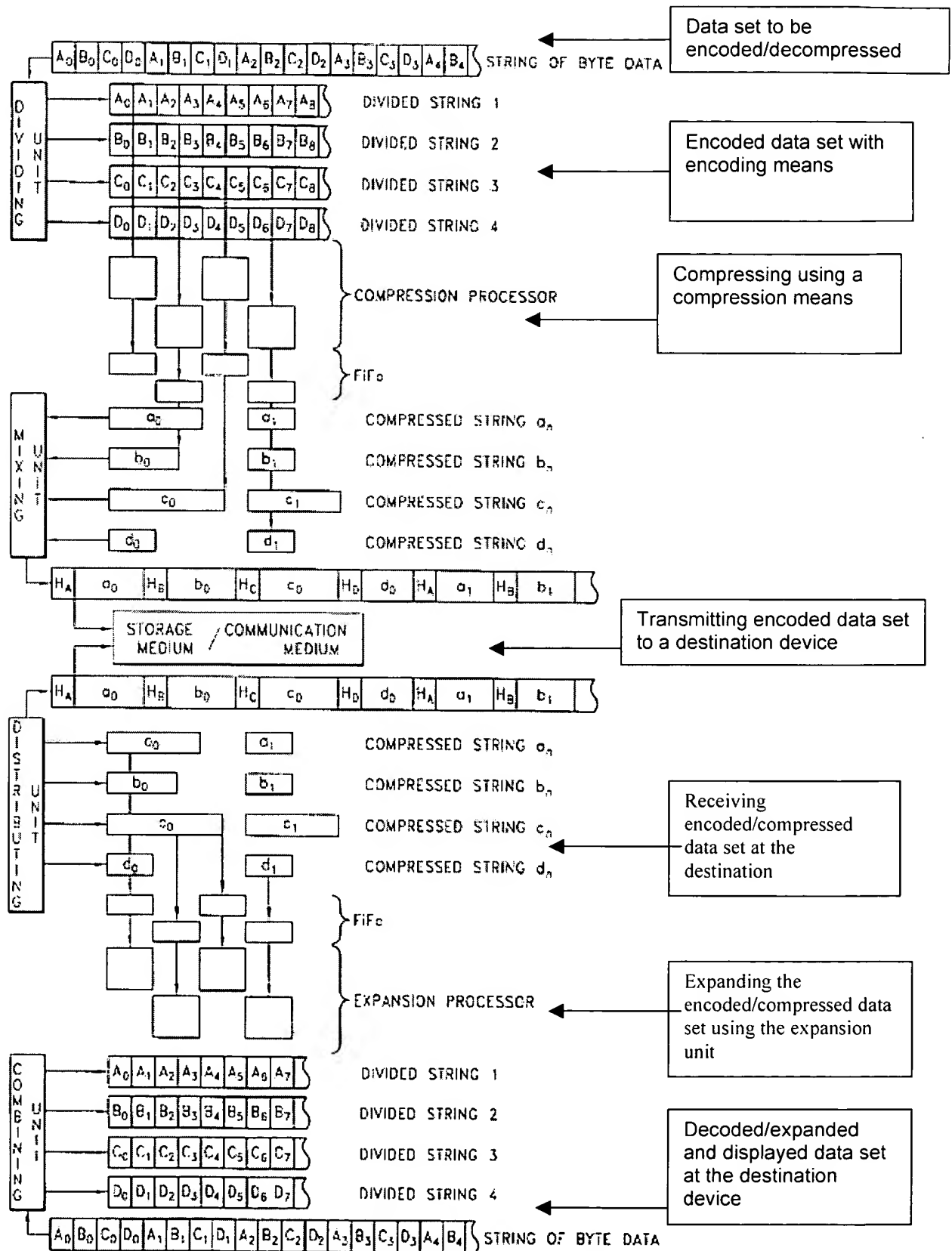
FIG. 4

An artisan working with the invention of <u>Kumaki</u> related to compression and expansion of data sets in a communication network would have been motivated to look for teachings that may have allowed other means of compression and expansion scheme used in the art of the vast encoding, compression, decompression and expansion teachings. As evidenced by the teachings of <u>Sebastian</u>, determining a compression function according to the common data types in a data set (claims 19, 20 and 49) and expanding the compressed data set according to the common data types in the compressed data set before or after a demand for the data set (claim 4) was known in the art at the time the invention was made. See Title, Abstract, Column 2 Lines 33-47. Thus, it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of <u>Sebastian</u> related to identifying/determining a compression and expansion function/algorithm according to the common data type in a data set and have modified the teachings of <u>Kumaki</u> related to compression and expansion of data sets in a communication network in order to improve the predetermined single format of compression/expansion with a generalized method that could be adapted to many common data types with respective compressing and expanding functions. <u>See Column 1 Lines 23-26 and Column 2 Lines 33-47.</u>

The already combined teachings of <u>Sebastian</u> and <u>Kumaki</u> substantially disclosed the invention as claimed. **However, failed to teach transmitting**

**encoded data set along with an expansion function to a destination device
and expanding the encoded data set using the received expansion
function at the destination device.**

However, as evidenced by the teachings of <u>Kawakita,</u> transmitting

encoded data set along with an expansion function to a destination device and

expanding the encoded data set using the received expansion function at the

destination device was known at the time the invention was made. Further,

disclosed displaying the records in the encoded data set before and after the

step of decompressing/decoding the encoded data set by delivering the content

of the data set before and after the step of expansion (encoded data set is

displayed and by a step of a mouse click on the encoded data set, performs the

expansion and displaying step (as also recited in claims 43, 44, 59, 60). **See**

<u>Kawakita</u>, Page 1, Lines 13-20, Page 2, Lines 14-25, Page 3, Lines 5-11,

Page 4, Lines 6-11. Thus, it is respectfully submitted that it would have been

obvious to one of ordinary skill in the art at the time the invention was made to

take the teachings of <u>Kawakita</u> and have modified the already combined

teachings of <u>Sebastian</u> and <u>Kumaki</u>, because such modification would facilitate

encoding and expanding data sets allowing a "self-decompression" of encoded

data set at the destination device producing the original data set. See

<u>Kawakita</u>, Page 3, Lines 16-20 and Page 4, Lines 6-11.

As per claims 3, 14, 40, 41 and 72: a first communication component configured to compress the encoded data set using a content compression algorithm before communicating the encoded data set to the first device, and a second communication component configured to decompress the encoded data set before the first device receives the encoded data set. [See Figures 3-4 and Column 2 Line 36 through Column 3 Line 41: Kumaki disclosed a content compressing unit compressing the encoded data set prior to transmitting to the destination device and further disclosed a decompression/ expansion unit for decoding the encoded data prior to receiving the data set at the destination device].

As per claims 51: wherein the second device encodes the entire data set with the compression function and communicates the encoded data set to the first device. [See Figure 4 (also disclosed below on page 6), Kumaki further disclosed compressing the whole content data using the compression unit and transmits the encoded content data to the receiving destination device].

As per claims 2 and 57, Kawakita disclosed a communication component configured to compress the encoded data set using a content compression algorithm before communicating the encoded data set to the first device [Fig. 4, Kawakita disclosed compressing the encoded set before sending it to the destination device as it is obviously expected].

As per claims 7, 23 and 65, <u>Kawakita</u> disclosed a second device encodes the entire data set with the compression function and communicates the encoded data set to the first device [Fig. 4, also disclosed above].

As per claim 13, <u>Kawakita</u> disclosed the encoded data set been compressed using a content compression algorithm before the encoded data set is communicated to the destination device [Fig. 4, <u>Kawakita</u> disclosed compressing data set using a compression algorithm].

5.   Claims 8-10, 24-26, 35, 52, 53 66, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Kumaki</u> (U.S. Patent Number 6,219,716) in view of <u>Sebastian</u> (U.S. Patent Number 6,253264) in view of <u>Kawakita</u> (JP 10283280 A) and further in view of <u>Ejima</u> (U.S. Patent Number 6,420,980).

As per Claims 8-10, 24-26, 35, 52, 53, 66, and 67:

The already combined teachings of <u>Sebastian</u>, <u>Kumaki</u> and <u>Kawakita</u> substantially disclosed the invention as claimed (as applied to the independent claims above). However, was silent about the details of "removing the information that is common to the individual records in the data set", "removing only the information that is common to the individual records in the data set", and "wherein the encoded data set includes the data without the information/semantic information that is common to the individual records in

the data set" (claims 35, 52 and 53). However, these specify functional

limitations are commonly known and widely implemented schemes of

compression and decompressing data sets in a communication network. In

these arts, Ejima taught lossless compression encoding by deleting the

common information in the data set and encoding the remaining data using a

compression/encoding means as an upper part of the data set and decoding

the encoded data part using the decoding function ("Huffman decoding")

partially encoding sets of data in the data set. See Column 3 Lines 3-60. Thus,

it would have been obvious to one of ordinary skill in the art at the time the

invention was made to take the teachings of Ejima related to removing the

commonly appearing information part of the data set and encoding the

remaining non common information and have modified the already combined

teachings of Sebastian, Kumaki and Kawakita in order to efficiently increase

the transmission rate when transmitting data sets between network devices in

a communication network.

6.   Claims 11, 27, 36, 54, 58, and 68 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Kumaki (U.S. Patent Number 6,219,716) in view of

Sebastian (U.S. Patent Number 6,253264) in view of Kawakita (JP 10283280 A)

and further in view of Grover et al. (U.S. Patent Number 6,420,980) hereinafter

referred to as Grover.

As per claims 11, 27, 36, 54, 58, and 68:

With respect to the rejection applied to the independent claims above, the already combined teachings of <u>Sebastian</u>, <u>Kumaki</u> and <u>Kawakita</u> substantially disclosed the invention as claimed. However, failed to teach, "to not encode the data with compression function and wherein the information that is common to the individual records in the data set is encoded with the compression function". However, these features are commonly practiced and known features in the art of computer communication networks and more specifically in compression and decompression of information data content. For example, as evidenced by the teaching of <u>Grover</u> (U.S. Patent Number 5,023,869), encoding mechanism that permits a partial Huffman encoding by encoding only the commonly repeating information in the data record extracting redundancy was disclosed (See Column 3 Lines 39-61). Thus it is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of <u>Grover</u> related to partial encoding and compression and have modified the already combined teachings of <u>Sebastian</u>, <u>Kumaki</u> and <u>Kawakita</u> "so that the number of symbols of transmission for a given amount of source information is reduce". See Column 3 Lines 47-49.

7.   Claims 5, 6, 15-18, 21, 22, 31-34, 45-48 and 61-64 are rejected under

35 U.S.C. 103(a) as being unpatentable over <u>Kumaki</u> (U.S. Patent Number

6,219,716) in view of <u>Sebastian</u> (U.S. Patent Number 6,253264) in view of

<u>Kawakita</u> (JP 10283280 A) and further in view of <u>Booth</u> (U.S. Patent Number

6,345,307).

As per Claims 5, 6, 15-18, 21, 22, 31-34, 45-48 and 61-64: The already

combined teachings of <u>Sebastian</u>, <u>Kumaki</u> and <u>Kawakita</u> substantially

disclosed the invention as claimed (as also applied to the independent claims

above). However, was silent about rendering text and/or image data during

expansion of the encoded data with codwords describing the image or text data

where the codwords representing or describing the text data and the common

data contents may be grater than the text or image of the records. However, as

evidenced by the teachings of <u>Booth</u>, rendering text and/or image data during

expansion of the encoded data with codwords describing the image or text data

where the codwords representing the common data contents may be grater

than the text or image of the records was known in the art at the time the

invention was made. See Figures 1-4, Column 4 Line 28 through Column 6

Line 39 and Column 10 Line 30 through Column 11 Line 13. Therefore, it is

respectfully submitted that it would have been obvious to one of ordinary skill

in the art at the time of the invention to take the teachings of <u>Booth</u> related to

data set comprising text and image data and the rendering of such contents

before and/or after the expansion of the encoded data set and have modified

the already combined teachings of <u>Sebastian</u>, <u>Kumaki</u> and <u>Kawakita</u> in order to

reduce the amount of bandwidth required to communicate data contents

among communication devices. See Column 2 Lines 43-45.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent

to applicant's disclosure.

    a.   <u>Frew</u> et al. (U.S. Patent Number 6,009,456) disclosed transmitting

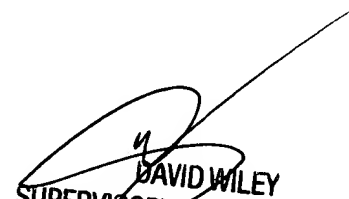an expansion/decompression function to a receiving/destination node.

9.   Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Yemane M. Gerezgiher whose

telephone number is (571) 272-3927. The examiner can normally be reached

on 9:00 AM - 6:00 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, David Wiley can be reached at (571) 272-3923. The fax

phone number for the organization where this application or proceeding is

assigned is 703-872-9306.

Information regarding the status of an application may be obtained from

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Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

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